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Published in:
Applied Financial Economics

Publication date:
1994

[Link to publication in Tilburg University Research Portal](#)

Citation for published version (APA):
Kabir, M. R. (1994). Share price behaviour around trading suspensions on the London Stock Exchange. *Applied Financial Economics*, 4(4), 289-295.

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Share price behaviour around trading suspensions on the London Stock Exchange

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The share price behaviour associated with a sample of trading suspensions on the London Stock Exchange is analysed. Trading suspensions are found to be prevalent, and last for a relatively long time period. The results indicate that suspensions on the London Stock Exchange are, on average, preceded by a substantial increase in share price, thus reflecting anticipatory price-behaviour. The presence of significant positive abnormal return following trading suspensions is also detected. This suggests that either the complete impact of information release takes place gradually, or not all relevant information is disclosed during the suspension period.

INTRODUCTION

The admittance of securities to trading on a stock exchange is quite an important event to the issuing firm. Of equal, or perhaps greater, importance is the suspension of securities from trading, because suspension of trading affects not only the firm concerned but also the investors and the market makers. Someone who intends to buy or sell a security cannot do so if trading of the security in question does not take place. The price of the security during a particular **period** is no longer allowed to be determined by the usual market mechanism.

Trading suspensions, presumably, do not happen under normal circumstances. The authorities, who take the decision to suspend trading of a certain security, use this particular regulatory measure because of several known or unknown reasons. The listing rules of the London Stock Exchange (officially named the International Stock Exchange) state The Committee may at any time and in such circumstances as they think fit suspend or cancel a listing. The Committee will not hesitate to do so to protect investors and to ensure an orderly market.¹ such emergence of circumstances needs to be interpreted in the broadest possible way. It could be an imbalance between supply and demand in a security, a forthcoming corporate news an-

nouncement, suspicion about a firms's financial and business operations, the possibility of insider trading, security price manipulation, or price fluctuations of an unusual kind.²

Now questions can be put forward as to the aptness as well as the validity of the authority's own judgement that something remarkable is going on of which not all market participants are aware. How can the Stock Exchange verify that indeed circumstances have arisen such that uninterrupted trading of a security cannot be maintained? Even if it is found that the belief of the authority is correct, how can the **Exchange** justify its action? Does the very act of suspension lead to the occurrence of a 'normal' market? What are the consequences of such actions for the firm concerned and the investors? These are a few issues which need thorough investigation before an opinion on the application of the suspension measure can be formed.

In fact, some researchers have addressed these issues. But the evidence does not conclusively show that normal security trading is restored through suspension. Hopewell and Schwartz (1978) examine the New York Stock Exchange initiated trading suspensions, and detect pre-suspension anticipatory price behaviour and virtually complete price adjustments afterwards. Investigating the Securities and Exchange Commission initiated trading suspensions in the United States, Howe and Schlarbaum (1986) find substantial

¹ Section 1, chapter 4 of Admission of Securities to Listing, Council of the Stock Exchange, England, 1984.

² It is worthwhile mentioning that suspension of trading is different from cancellation of trading. The continuation of a suspension for a prolonged period without the issuer of the concerned security taking adequate action to obtain restoration of listing may lead to eventual cancellation. The measure can also be taken directly in some other situations.

devaluations of the suspended securities during as well as after the suspension period. Kryzanowski (1979) analyses a sample of allegedly manipulated Canadian stocks, and observes that manipulation has indeed been effective in causing an abnormal upward movement in stock prices in the pre-suspension period. He also finds that prices continue to decline following the reopening of trading in case of suspension associated with bad news. However, the opposite does not happen in the case of good news. De Ridder (1990) observes favourable information release during trading suspensions, and efficient price adjustments in the post-suspension period on the Stockholm Stock Exchange. Analysing suspensions on the Amsterdam Stock Exchange, Kabir (1992) finds no anticipatory price behaviour and nearly complete adjustment to new information released during suspension.

Besides these less than conclusive results regarding share price behaviour associated with trading suspension, the author is not aware of any similar study performed on the London Stock Exchange (LSE), although this particular phenomenon is widely prevalent, and sometimes in a unique manner. **For example, it is not at all uncommon on the LSE** for many trading suspensions to remain in force for several weeks and even months. This study, therefore, investigates the phenomenon of trading suspensions on the London Stock Exchange, and is organized in the following manner. Section II presents a discussion on the practice and the theory of trading suspension. Various aspects of the sample of trading suspensions are described in Section III. The next section outlines the methodology, while the results of the study are presented in Section V. The paper ends with some **concluding remarks**.

II SUSPENSION OF SECURITY TRADING

Institutional practice

As mentioned earlier, a listing on the London Stock Exchange may be suspended at any time and in such circumstances as found fit by the Exchange. Usually, the measure is **adopted due to failure by the issuer of the security to comply** with listing obligations. One of the principal objectives of continuing obligations is to secure immediate release of information which might reasonably be expected to have a material effect on market activity in, and prices of, listed securities. Consequently, the Exchange suspends security trading pending an announcement, or publication of facts on the reorganization of a company, or clarification of the position of a firm. Suspension may also take place with or without the request of the issuer of the security, or pending the removal of a suspension on an overseas stock exchange, or if the market capitalization and shareholding position is such that an adequate market in the security cannot be maintained. The procedure for lifting trading suspension

depends on various circumstances, and the Exchange has the right to impose such conditions as considered appropriate.

Theoretical discussions

We have already come across several reasons to suspend exchange trading in a security. These reasons have one thing in common: alleged emergence of a situation where insufficient dissemination of actual information prevails. The act of suspension, irrespective of the real reason, also produces a common effect: making all concerned aware of something **Unusual. Once the suspension period is over, there is not** necessarily a similar effect. That depends on market evaluation of the suspension, and of the newly released information. If suspension conveys to investors unfavourable information (for example, the company is in financial difficulties), then the share price adjusts downward once trading is reinstated. On the other hand, if favourable information is disseminated during the suspension period (for example, successful merger negotiations), then investors would realize positive returns over the suspension period.

When is a **measure** like trading **suspension** beneficial? Theoretically, if the authorities are able to correctly identify the precise moment when it could be established that the market does not possess the right information regarding a particular security, then a suspension might help make that piece of information available to market participants. Thus, one expects trading suspensions to be associated with the release of new and material information, to the market. Before the occurrence of suspension, one remains confident (in a semi-strong form efficient market) that market prices of securities reflect all publicly available information as the Exchange is constantly monitoring all listed stocks. The suspension measure is assumed to take place at such a moment that the price of the security does not yet incorporate the new information. The very announcement of suspension alerts the market to something unusual regarding the security.

Trading suspension remains in force until the authorities believe that new information related to the security has been released and the market has had sufficient time to properly evaluate the new information. Once the suspension period is over and trading of the security is reinstated, the price of the security, if the market is efficient in the semi-strong form, should reflect market evaluation of the newly released information. One can then consider the trading suspension measure as an effective one. The behaviour of the security price during the post-suspension period is expected to be different depending on whether the newly released information is interpreted by the market as good or bad news.

Although considerations leading to the decision to suspend security trading seem appealing, doubts may arise **about the application of this particular measure. The decision** to suspend trading, together with its consequences, should, in fact, be compared with the consequences of

uninterrupted trading. According to Hopewell and Schwartz (1978), trading suspension imposes a set of opportunity losses and gains on those market participants who would have otherwise engaged in transactions during this period. Evaluation of these costs and benefits depends upon the judgment exercised. Under what circumstances is an uninterrupted security trading then undesirable? Mendelson (1972) suggests that continuity in trading has its merits, but there is no virtue in providing facilities for wild trading on half digested information and misinformation. Therefore, if trading is suspended, then it involves a trade-off between a postponement of execution against more accurate pricing.

But how can one know beforehand which information would lead to correct pricing and which would not? Why not let the security market decide on it? Stigler (1964), questioning stock exchanges' practice of trading suspensions, notes the following:

To prevent a trade is no function of the Exchange, and any defense must lie in a desire to avoid 'unnecessary' price fluctuations. An unnecessary price fluctuation is surely not one called for by the conditions of supply and demand of the week, even though the fluctuations may reflect supply and demand of the hour. This suspension of trading means that the exchange officials know the correct price change when there is a flood of buy or sell orders, (p. 130).

Stigler is pointing to the fact that no damage is done if some investors who, after successful searching, possess a piece of information and try to translate that information into security price, or if others who do not possess the information try to speculate on it. In such circumstances, an interruption of continuous trading would only delay incorp-

oration of that information into the price. And such delays would only help the 'free riders': investors who reap only the benefits, if any, from information released once a trading suspension takes place, but do not bother to incur any cost to collect it.

In sum, operational criteria to evaluate the costs and the benefits of trading suspensions are hard to find. But, as a whole, security trading suspension can be considered effective if it happens prior to any kind of anticipation by market participants, and new and material information is revealed as well as widely disseminated during the period of suspension. Investigating security prices before and after trading suspension would help us to ascertain whether suspension is effective in practice. On the other hand, trading suspensions can be considered imprudent if the securities market itself could have tackled information dissemination efficiently. Empirical tests regarding the validity of such inference are rather difficult to perform.

III DESCRIPTION OF THE SAMPLE

Share price and other information on trading suspensions are collected from the London Share Price Database. Like a monthly database, it identifies only those suspensions which occur or remain effective at the end of each month. Between January 1970 and March 1988, 426 trading suspensions associated with 364 different companies were found. Among these, 311 (85%) companies underwent suspension only once, 44 (12%) were affected twice, and nine (3%) companies had their securities suspended on three occasions. The time-length of these trading suspensions is presented in Table 1. It is observed that on 122 (29%) occasions suspension continued for at most two months (as represented by one datapoint only), while the remaining 304 (71%) cases were suspensions lasting definitely more than one month (more than one datapoint is present). This phenomenon of so many suspensions lasting such a long time is rather uncommon. It reflects issues of vital importance concerning the suspended firm (not mere release of specific information).

Another interesting phenomenon found in the sample is that as much as 62% of the companies affected by trading suspension have later on (could be several years) disappeared from official listing. The reasons are reported in Table 2. It is seen that the most important reasons for non-survival were acquisition/takeover/merger, and liquidation-related phenomena. These events might provide an ex-post clue as to a possible reason behind the trading suspension decision. There were some cases of disappearance from official listing due to automatic cancellation – a stock remaining suspended for more than three years; some due to shares acquired afterwards – during suspension these shares were traded in the over-the-counter market.

The presence of any industry bias in the sample is also investigated. The results are shown in Table 3. It is found

Table 1. Distribution of the length of trading suspensions

Datapoints*	Number
1	122
2	70
3	48
4	27
5	27
6	9
7	17
8	6
9	4
10	3
11	3
12 and more	80
	426

* Suspension on n consecutive points means:
 $(n-1)$ months < length of suspension < $(n+1)$ months

Table 5 *niefrihun'nn frf companies affected by trading suspension, which later on disappeared from exchange listing due to various reasons (Period: January 1970-March 1988)*

Reason	Number	%
Acquisition/takeover/merger	107	29
Liquidation	31	9
Receiver appointed/liquidation	39	
Voluntary liquidation	10	3
Automatic cancellation	12	3
Quotation cancelled for unknown reasons	14	4
Suspension/cancellation		
with shares acquired later	6	
Other reasons	7	
	226	62
Firms still listed	138	38
Total number of affected firms	364	100

that except for industrial holding companies, no other industry was especially affected by trading suspensions.

In performing the stock return analysis, I use a window of six years - three years before and three years after suspension - to estimate model parameters³. Stocks having suspensions within the window itself are also deleted. Thus, the final sample consists of 83 trading suspensions involving 78 different companies. Of these, 35 firms (45%) disappeared later on from stock exchange listing (after at least three years of trading). Out of these, 24 were due to mergers and acquisitions, and eight were due to liquidation. The sample of trading suspensions has only five companies with suspension taking place twice. A total of 73 firms experienced suspension on only one occasion. A look at the duration of trading suspension in the sample reveals that 20% even lasted for more than six months. Another unique characteristic is that 75 (90%) of these trading suspensions occurred in the case of firms with less than five million pounds sterling of market capitalization. Only eight suspensions took place for companies with a capitalization of more than five million pounds.

IV METHODOLOGY

I follow the standard event study methodology using alternative model specifications in order to analyse the share price behaviour. First, I use the Market Model which posits that returns of stocks tend to go up and down together with returns of the market. The relationship is written as:

$$R_{it} = a_i + b_i R_{mt} + e_{it} \quad (1)$$

³ The use of a six-year history of monthly returns is not unconventional in empirical research. See, for example, Dimson and Marsh (1986) and Franks and Harris (1989).

Table 3. *Industry classification of suspended companies*

Industry type	Number	% of total listed
	16	17.6
	9	22.5
	12	10.1
	12	15.0
	11	15.1
	18	36.7
	14	28.0
	13	56.5
	10	13.2
	12	5.7
	29	24.0
	21	21.0
	187	18.3
	364	17.7

where,

R_{it} = the rate of return on stock i in period t

R_{mt} = the market rate of return in period t

a_i, b_i = stock- i -specific and time-independent parameters

e_{it} = random disturbance term for stock i in period t .

If suspension of trading is associated with some sort of abnormal behaviour, then this would be reflected in the disturbance term during the period surrounding suspension. The estimate for the abnormal return (AR) for i in t will be

$$AR_{it} = R_{it} - (\hat{a}_i + \hat{b}_i R_{mt}) \quad (2)$$

where \hat{a}_i and \hat{b}_i are the estimated coefficients obtained from data which exclude observations surrounding suspension, and t is a time-index covering the period around suspension. Here, it is assumed that the coefficients remain unchanged in period t . AR_{it} is interpreted as the deviation in period t of the return of suspended stock i from its normal relationship with the market. The accuracy of this estimated abnormal return obviously depends on the validity of the model used as well as the parameter estimates.

Besides estimating abnormal returns using the Market Model, I estimate market-adjusted returns for each stock in order to test whether the inclusion of specification improperly influences the results. The abnormal return, in this approach, is obtained in the following manner:

$$AR_{it} = R_{it} - R_{mt} \quad (3)$$

In each of these two alternative model specifications, the average abnormal return (AAR) for the sample of trading suspensions is calculated by

$$AAR_i = (1/n) \sum_{t=1}^n AR_{it} \quad (4)$$

where AR_{it} is the abnormal return for stock i in period t , and n is the number of suspensions in the sample. The estimate AAR gives an indication of average abnormal return realized by stockholders of suspended firms. In order to see whether these abnormal returns are statistically significantly different from zero, a t -test is performed by dividing the average abnormal return by the standard deviation of average abnormal returns computed from the estimation period.

The cumulative reaction of stock prices to trading suspensions is also examined. Therefore, the above averages are cumulated over a period of time surrounding the suspension period in order to obtain the Cumulative Average Abnormal Return (CAAR):

$$CAAR = \frac{1}{t-k} \sum_{t=k}^t AAR_t \quad (5)$$

The Market Model parameters are estimated by regressing individual stock returns on the market returns using the ordinary least squares technique. The return on the *Financial Times* - Actuaries All Share Index, a market value-weighted index covering around 750 stocks and over 80% of the aggregate UK capitalization, is used to calculate the market return. The returns data are adjusted for dividend payments and stock splits.

V. EMPIRICAL RESULTS

The following paragraphs provide the results obtained from the methodologies described earlier. Month 0 is defined as the month in which a trading suspension occurs. Month -1 represents one month immediately before the month in which trading suspension takes place, while month $+1$ represents one month after the month in which trading is reinstated.

Market Model returns

The results obtained from using the Market Model are presented in Table 4, and also shown graphically in Fig. 1. Observe that there is a continuous upward trend in the abnormal returns before the suspension period. The average abnormal returns are positive in the five months before

trading suspension, and are statistically significant in the two months preceding suspension. In each of the two consecutive months before trading suspension, significant abnormal returns of 5-6% on average are obtained. This share price increase in the pre-suspension period could be explained by the fact that some investors were anticipating favourable news about the stock, or that either information leakage or insider trading was taking place. The existence of pre-suspension abnormal return also shows that the action of exchange authorities came late. By the time trading was suspended the stock prices had already increased by 19%. It appears that the stock exchange authority becomes conscious of some abnormal happening and then considers taking the suspension measure once it finds out that the share concerned has undergone a substantial price increase, or that gradual release of new information has already started.

In the first month of post-suspension trading, it is found that stock prices increase, on average, by as much as 11%. This could indicate that even though new information might have been released during the suspension period, it was not widely disseminated among all investors. The goal of trading suspension - ensuring equitable information dissemination among all investors so that opportunities for some to earn extraordinary profits disappear - seems not to be achieved. The presence of relatively large abnormal return in the month immediately following trading suspension could also suggest inefficient lagged adjustment to new information released during the suspension period.

Market-adjusted returns

In order to see whether the above findings are influenced by the Market Model specification, I have analysed the behaviour of stocks around trading suspension using the market-adjusted returns. The results are qualitatively similar to those obtained earlier. Positive abnormal returns before trading suspension are found. In the month following reinstatement of trading a more pronounced increase in share prices is also detected.

Non-merger sample

One may point out that the sample of trading suspensions contains an unusually large number of firms involved in

Table 4. Average abnormal returns around trading suspensions; (Market Model results)

Month	AAR	$t(AAR)$	CAAR	Month	AAR	$t(AAR)$	CAAR
-5	0.007	0.261	0.007	+1	0.110	3.823*	0.110
-4	0.039	1.350	0.046	+2	-0.025	-0.880	0.085
-3	0.025	0.867	0.071	+3	0.010	0.358	0.095
-2	0.063	2.200*	0.134	+4	-0.002	-0.067	0.093
-1	0.054	1.890	0.188	+5	0.017	0.598	0.110

Significance at the 5% level.

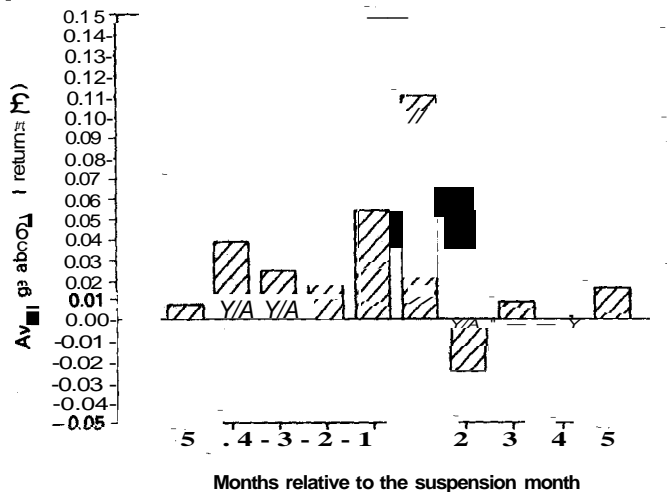


Fig. 1. Average abnormal returns around trading suspensions: (Market Model)

merger and acquisition activities. In fact, there were 24 firms in my sample which disappeared from the stock exchange listing at a later stage due to merger/acquisition. One would then be inclined to think that the abnormal returns found in my analysis could perhaps be due to the anticipation of future merger and/or acquisition. Therefore, in order to remove such a possibility, all trading suspensions related to these 24 firms are eliminated from the sample. The analysis is then carried out for a sub-sample consisting of 55 trading suspensions. Here, I should mention that those 24 firms had their securities traded for at least another three years, it is highly unlikely that share prices start showing abnormal behaviour more than 36 months before any merger or acquisition really takes place. Nevertheless, the sample is analysed to eliminate any remaining doubts. The results obtained using the Market Model are presented in Table 5. It is found that the conclusions made earlier remain unchanged. The estimated abnormal return in the month following the suspension month is even higher compared to the previous cases.

Infrequent trading

When shares are traded infrequently on a stock exchange, standard measurement of the riskiness of these shares is subject to bias, and therefore, expected returns are not measured accurately.⁴ Several methods of calculating unbiased estimates of stock betas have been suggested in the literature. This study employs the two widely-used methods as proposed by Scholes and Williams (1977) and Dimson (1979). Following Dimson's suggestion that with monthly UK data one leading and several lagged market terms are needed if risk measures are to take account of the effects of infrequent trading, I use one lead and three lags in my estimation of Dimson beta.

My separate estimation of systematic risk produces the following result: while the average beta obtained from the simple regression method is 0.58, that obtained from using the Scholes-Williams procedure and the Dimson method is 0.56 and 0.76, respectively. Using both Scholes-Williams beta and Dimson beta, I calculate abnormal returns once again and present them in Table 6.

The previously obtained findings are confirmed as there is little change in the estimated abnormal returns. Trading suspensions on the London Stock Exchange are found to be associated with significant positive abnormal returns. Within a span of four trading months, starting from two months prior to the suspension month until one month after the month of trading reinstatement, investors were able to earn a total abnormal return of 22%.

VI CONCLUSIONS

In this paper the phenomenon of trading suspensions is analysed. This regulatory measure is usually taken when the authorities believe that a stock is being traded with inadequate information. My purpose is to see how effective this measure is by investigating price behaviour of a sample of suspended stocks. Since during the period of suspension no trading takes place, my interest lies especially in price behaviour surrounding this period.

Table 5. Average abnormal returns around trading suspensions: (Non-merger sample)

Month	AAR	t(AAR)	CAAR	Month	AAR	t(AAR)	CAAR
-5	-0.002	-0.077	-0.002	+1	0.129	4.394*	0.129
-4	0.053	1.815	0.051	+2	-0.039	-1.316	0.090
-3	0.022	0.731	0.073	+3	-0.001	-0.019	0.089
-2	0.065	2.219*	0.138	+4	-0.008	-0.272	0.081
-1	0.020	0.682	0.158	+5	0.019	0.648	0.100

* Significance at the 5% level.

⁴The use of monthly data involves fewer problems compared to the use of daily data in which case infrequent share trading could pose a severe problem.

Table 6. Average abnormal returns around trading suspensions: (Infrequent trading adjustment)

Month	A. Scholes-Williams method			B. Dimson method		
	AAR	<i>t</i> (AAR)	CAAR	AAR	<i>t</i> (AAR)	CAAR
-5	0.007	0.245	0.007	0.000	0.000	0.000
-4	0.040	1.382	0.047	0.040	1.384	0.040
-3	0.021	0.717	0.068	0.021	0.749	0.061
-2	0.060	2.097*	0.128	0.059	2.039*	0.120
-1	0.054	1.884	0.182	0.059	2.041*	0.179
+1	0.109	3.808*	0.109	0.108	3.755*	0.108
+2	-0.024	-0.830	0.085	-0.028	-0.974	0.080
+3	0.008	0.263	0.093	0.010	0.354	0.090
+4	-0.002	-0.084	0.091	-0.007	-0.228	0.083
+5	0.016	0.549	0.107	0.018	0.633	0.101

* Significance at the 5% level.

The results obtained from analysing stock returns associated with a sample of trading suspensions on the London Stock Exchange lead to the following conclusions⁵. First, suspension is preceded, on average, by an increase in share price. This indicates the presence of anticipatory behaviour, information leakages, or insider trading. The positive trend in abnormal returns is independent of any particular model used. Second, the study detects the presence of significant positive abnormal return is the month immediately following the month of trading **reinstatement**. This finding casts doubt on the belief that trading suspension results in wide dissemination of information among investors. It also indicates that either the complete impact of new information release takes place only gradually (a phenomenon hard to explain in an efficient market context), or not all relevant information is disclosed during the suspension period.

It may be useful to compare the results presented here with those from other stock exchanges. The empirical evidence is unequivocal as far as the release of new information during the suspension period is concerned: share price adjusts in response to the new information. The direction of adjustment depends whether the information is favourable or not. But the evidence remains obscure as to the share price behaviour around the suspension period. Both efficient as well as inefficient stock market reactions to trading suspensions have been detected.

ACKNOWLEDGEMENTS

The author would like to thank Elroy Dimson, Theo Vermaelen, Christian Wolff, and an anonymous referee for numerous helpful comments. The paper has been presented at the Workshop on Corporate Finance at the European

Institute for Advanced Studies in Management (Brussels), the Small Firm Financial Research Symposium (Fresno), and the Pacific Basin Finance Conference (Seoul).

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⁵ These conclusions need to be interpreted with a little bit of caution because the investigated suspensions are of relatively long-term duration, and monthly return data are used in this study.